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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#15  
5/8/03

Applicant : Roger PELLENC

Group Art Unit: 3219

Serial No : 09/784,094

Examiner: N.S. Mammen

Filed : February 16, 2001

For : TOOL FOR SOIL CULTIVATING MACHINE AND MACHINE  
USING SUCH TOOLS

**APPEAL BRIEF**

**RECEIVED**

**MAY 06 2003**

**GROUP 3600**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231  
Sir:

This appeal is from the Examiner's final rejection of September 26, 2002. Appellant filed a Notice of Appeal on February 26, 2003, along with a request for a two-month extension of time, and is filing this Appeal Brief within the two-month due date of April 28, 2003 (April 26, 2003 being a Saturday).

**A. REAL PARTY IN INTEREST**

The real party in interest for the invention is Pellenc of Pertuis, France by an assignment recorded in the U.S. Patent and Trademark Office on February 16, 2001 at Reel 011562 and Frame 0428.

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**B. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences which would directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**C. STATUS OF CLAIMS**

Claim 46 stands finally rejected under 35 USC 112, second paragraph, as being indefinite.

Claims 31-54 stand finally rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 4,050,519 to VAN DER LELY (hereinafter VAN DER LELY).

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**D. STATUS OF AMENDMENTS**

The response to the Final Official Action filed on December 26, 2002 has been considered, as indicated in the January 8, 2003 Advisory Action. However, Applicant is concurrently filing a Second Rule 1.116 Amendment canceling claim 49. In preparing the instant Appeal Brief, Applicant discovered that claims 48 and 49 were identical. No amendment, other than the aforementioned response, has been filed following the final rejection.

## E. SUMMARY OF INVENTION

By way of non-limiting examples, the invention is directed to a tool or tools and to a rotor with tools mounted thereto. According to one embodiment shown in FIGS. 1-7, the tool, which is generally designated by reference numeral 1, includes (considering its position during operation): a fixing end 2 located in an upper spatial zone Z1, this end being arranged or configured so that it can be connected to the rotor of a soil cultivating machine, such as a weeding machine; a connecting portion 3 located in an intermediate spatial zone Z2, this intermediate portion extending downwardly from the fixing end 2; and an active portion 4 located in a lower spatial zone Z3. *See paragraph [0032] of the instant specification.*

The connecting portion 3 can advantageously have an inclined position with respect to the fixing end 2 and the active portion 4. These portions are arranged distant from one another, both in the vertical direction (FIG. 1) and in the horizontal direction (FIG. 2). The upper fixing end 2 of the tool is advantageously arranged or configured to enable it to be mounted with freedom of pivoting over a limited amplitude, on a rotor (see e.g., FIG. 5). The rotor can in turn be mounted on a weeding machine or other soil cultivating machine. The tool 1 has a fixing ring or bush portion 2 that allows the tool 1 to be mounted about a journal axis (see e.g., FIG. 5). *See paragraphs [0033]-[0034] of the instant specification.*

The lower active portion 4 of the tool extends forwardly, in relation to the direction of rotation of the tool, from the distal end of the connecting portion 3. This active portion

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4 has a low height H corresponding to the height of the zone Z3 in which such portion moves, this height being preferably lower than half the total height  $Z1 + Z2 + Z3$  of the tool. Moreover, the active portion 4, seen in the direction of the pivoting axis B-B of the tool 1, or along the axis of rotation of the rotor (on which the latter is adapted to be mounted), has a bent shape demarcated by a leading edge 5, a convex outer edge 6, and a concave inner edge 7. The leading edge 5 has a position that is inclined forwardly and toward the concave inner edge 7 and that is in relation to a radius joining the pivoting axis of the tool 1 to the front end of the convex outer edge 6 (FIG. 2). The active portion 4 thus has the form of a curved band oriented forwardly and at a distance from the fixing end 2 of the tool 1. *See paragraphs [0035]-[0037] of the instant specification.*

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The active portion 4 also has a length L which, during retraction, makes it possible to preserve the operating width and, therefore, to draw a tangent to the vinestock. The leading edge 5 of the active portion 4 is beveled to facilitate the penetration into the ground. Additionally, the active portion 4 is inclined forwardly, such that the lower surface 8 of its rear portion, for connecting to the intermediate portion 3, is positioned at a substantially higher level than that at which the lower surface 9 of its working front portion 10 is located. The lower surface 9 of the front portion 10 is approximately planar and forms a small rake angle  $\alpha$ , for example on the order of  $6^\circ$ , with a plane P-P substantially perpendicular to the pivoting axis B-B of the tool. Finally, the upper surface of the active portion 4 of the tool

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1 includes a boss 11 located after its front portion, at a distance from the leading edge 5. *See paragraphs [0038]-[0042] of the instant specification.*

FIG. 5 shows an embodiment of a soil cultivating machine head, which can be used on a weeding machine or similar machine. The head includes a rotor 12, the tools 1 and a removable fixing system and can be used for cultivating soil S. At least two tools 1 are configured to be mounted on the rotor 12. The tools 1 are mounted with freedom of pivoting during operation. Advantageously, this mounting is carried out under such conditions that when the tools 1 are installed on the rotor, their pivoting axes B-B converge downwardly toward the axis A-A of the rotor, by forming an angle  $\beta$  with the axis of rotation A-A, for example an angle on the order of  $9^\circ$ . The removable fixing system of the tools 1 includes, for each of them, a journal axle 13 around which the journal ring 2 of the tool 1 is pivotally mounted. One of the ends of this journal axle 13 is housed in a bore provided in the vicinity of the periphery of the rotor 12, whereas its opposite end is engaged in an opening made in a fixing flange 14. A pressure washer 15 can be arranged around the lower end of the journal axle 13, between a circular shoulder 13a thereof and the fixing flange 14, so as to enable the tools 1 to pivot. The holes provided in the rotor 12 for mounting the interchangeable tools 1 have an axis B-B inclined with respect to the axis of rotation A-A of the rotor, such that the journal axles 13 and the axles of the mounting rings 2 are also inclined along the axis B-B. *See paragraphs [0044]-[0047] of the instant specification.*

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The flange 14 is axially fixed at the base of the rotor 12 by way of a single screw 16 extending through a central opening of the plate, and which is screwed in a threading provided in the lower portion of the rotor. In this way, one can replace the tools 1, when they are worn out, for example, by loosening the screw 16, removing the flange 14 and the washers 15, detaching the tools 1, and replacing them with their journal axle 13. To attach the new tools 1, the process is reversed. *See paragraphs [0048]-[0049] of the instant specification.*

The working head of the soil cultivating machine according to the invention can be equipped with at least two tools 1, whereas the rotor 12 can be configured to receive three tools or more. These tools 1 can be angularly and uniformly spaced apart. When the working head is equipped with two tools 1, the latter are fixed in diametrically opposed locations of the rotor 12 (FIGS. 4-7). In this case, and as shown in FIGS. 5 and 6, the support surfaces of the flange 14, constituted by the lower surfaces of the washers 15 and the central portion of the rotor 12, are placed on an arch of a circle, whereas the fixing flange is substantially planar and provided with a capacity of elastic deformation. When the screw 16 is screwed home, a concave deformation of the flange 14 occurs, whose ends are then strongly applied, by spring effect, on the washers 15 for maintaining the journal axles 13. *See paragraphs [0050]-[0051] of the instant specification.*

The rotor 12 includes a cylindrical lower portion 12a having a smaller diameter than

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that of its upper portion 12b beneath which the tools 1 are fixed. This cylindrical lower portion 12a serves as an abutment to limit the rearward retracting movement of the tools, when the latter encounter a hard obstacle. To this end, the rear portion of the active portion 4 of the tool has an edge 22 that comes into abutment against the cylindrical portion 12a at the end of the retracting movement of the tool. *See paragraph [0052] of the instant specification.*

The fixing end 2 of the tools 1 and the tool-carrying rotor 12 are arranged so as to allow a free pivoting of the tools on an angle. This allows, for example, the tools 1 to be free to pivot or retract when hard bodies (stones, etc.) are encountered. The tools 1 are free to ~~pivot back by an angle on the order of 45°-65°~~ toward the rear relative to an original operating position, i.e., one that is occupied by the tools 1 when the rotor rotates without encountering any resistance. *See paragraph [0053] of the instant specification.*

Rotors equipped with tools 1 according to the invention can rotate about an axis A-A at speeds comprised between 200 and 1500 rpm. Since the tools 1 are mounted so as to rotate freely about their journal axis B-B inclined with respect to the axis A-A, when the rotor rotates, the tools 1 are tensioned under the effect of the centrifugal force (solid lines in FIG. 7). When they encounter a hard obstacle (stone, large piece of wood, scrap iron or the like) or when the ground capacity opposes an excessive resistance to penetration, they retract by pivoting about their journal axis B-B (dotted lines in FIG. 7), which makes it possible to

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absorb the impacts and prevents the operating head of the machine from becoming unstable. During this retracting phase, the tools pivot rearwardly by rising, due to the inclination angle  $\beta$  of their journal axis B-B, such that the operating depth is reduced; this makes it possible to avoid the obstacle and to limit the torque and, therefore, the power to be transmitted to maintain the rotating speed of the rotor. Furthermore, it is noted that during the retracting phase, the tools 1, due to their shape, still draw a tangent to the outer diameter of the bell-shaped guide 19, such that the operating width remains constant. *See paragraphs [0060]-[0061] of the instant specification.*

FIGS. 8-10 show another embodiment of the tool 1, which is more particularly adapted for working soils with thick grass. The tool 1 makes it possible to cut shallow-rooted grass. This embodiment differs from that of FIG. 1 in that: the connecting portion 3 is less inclined; the sharp leading edge 5' of the active portion 4 is curved and extends rearwardly, considering the direction of rotation of the tool during operation; the tool 1 includes an abutment heel 23 extending from its fixing ring 2 and from the connecting portion 3. *See paragraphs [0062]-[0063] of the instant specification.*

The invention encompasses other embodiments and/or features which are not described herein. However, all the claimed features have been explained with sufficient clarity to enable the reader to understand the invention.



## **F. ISSUES ON APPEAL**

- (1) **Whether Claim 46 Is Improperly Rejected Under 35 U.S.C. section 112, Second Paragraph, as Being Indefinite.**
- (2) **Whether Claims 31-54 Are Improperly Rejected Under 35 U.S.C. section 102(b) as Being Anticipated By VAN DER LELY (US 4,050,519).**

## **G. GROUPING OF CLAIMS**

The following groups of claims are considered to stand or fall together, but only for the purpose of this appeal: claims 35-38, 40, 41, 44, 48, 50 and 51 stand or fall with claim 33. The remaining claims do not stand or fall together, at least for reasons explained below.

## **H. ARGUMENT**

- (1) **The Rejection of Claim 46 Under 35 U.S.C. section 112, Second Paragraph, as Being Indefinite is in Error, the Examiner's Decision to Reject This Claim Should be Reversed, and the Application Should be Remanded to the Examiner.**

Reversal of the rejection of claim 46 under 35 USC 112, second paragraph, as being indefinite is requested.

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As a preliminary matter, Appellant notes that, in the interview summary of January 8, 2003, the Examiner indicated that he agreed to reconsider this rejection. However, since no affirmative statement has been made by the Examiner indicating that the rejection has been overcome by Appellant's response, Appellant assumes that the Examiner has maintained this rejection and herein submits that claim 46 is fully in compliance with the requirements of 35 U.S.C. § 112, second paragraph.

In the rejection, the Examiner asserted that claim 46 is indefinite because it recites both a broad range and a narrow range. Appellant respectfully disagrees. As was explained in Appellant's Rule 1.116 response, dependent claim 45 recites the broad range, while claim 46, which depends from claim 45, recites the narrow range. By the Examiner's own admission, the rejection must be based on the broad range and the narrow range being recited "in the same claim." See page 2, line 2 of paragraph 3 of the Final Office Action. However, it is clear that claims 45 and 46 are not the "same claim." Accordingly, this rejection is improper on its face.

Appellant notes that the essential determination as to whether the claims satisfy 35 U.S.C. 112, second paragraph, requires a consideration as to whether the claims set forth the invention with a reasonable degree of precision and particularity. The definiteness of claim language is not analyzed in a vacuum, but rather, is considered in light of the prior art teachings and in view of Applicant's disclosure, as it would be interpreted by one having the

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ordinary level of skill in the pertinent art. *In re Moore*, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971).

In rejecting a claim under section 112, second paragraph, the Examiner is required to establish that one of ordinary skill in the art, when reading the claims in light of the specification, would not have been able to ascertain with a reasonable degree of precision and particularity the particular area set out and circumscribed by the claims. *Ex parte Wu*, 10 USPQ 2d 2031, 2033 (B.P.A.I. 1989). If the disclosure and claims are sufficient for one skilled in the art to understand, the Examiner "should not reject claims or insist on their own preferences if other modes of expression selected by applicants satisfy the statutory requirements." MPEP 2173.02.

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Accordingly, Appellant submits that, measured against the correct standard enunciated above, claim 46 is not indefinite. Thus, for reasons given above, reversal of the Examiner's decision to finally reject claim 46 as indefinite is requested.

- (2) **The Rejection of Claims 31-54 Under 35 U.S.C. section 102(b) as Being Anticipated By VAN DER LELY is in Error, the Examiner's Decision to Reject These Claims Should be Reversed, and the Application Should be Remanded to the Examiner.**

Reversal of the rejection of claims 31-54 under 35 USC 102(b) as being anticipated

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by VAN DER LELY is requested.

In the rejection, the Examiner asserted that this document discloses all the features recited in these claims including a rotor 6, tools 25 which have a fixing end 24 that include a ring 23 adapted to receive a journal axle 24, a soil engaging end 26, and a connecting portion, as well as a mechanism 22 which biases the tools against the rotor.

Appellant respectfully disagrees with each and every one of these assertions and conclusions. Notwithstanding the Office Action assertions as to what this document discloses, Appellant submits that VAN DER LELY clearly lacks, inter alia, a tool which is movably fixed to a rotor or which can be pivotally and removably mounted to a rotor, as recited in independent claims 31-33.

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It is also clear that VAN DER LELY clearly lacks, inter alia, a mechanism for biasing the tools against the rotor, as recited in independent claims 31 and 32, inter alia, each fixing end comprising a ring portion which is movably fixed to the rotor via an axle, as further recited in independent claim 32, and inter alia, a tool having an active portion comprising a lower space zone and an approximately planar portion having a sharp leading edge, wherein the active portion projects towards a direction of rotation of a rotor when the tool is installed on a rotor, as recited in independent claim 33.

Appellant submits that there is entirely no disclosure in VAN DER LELY with regard to any of these features. To the contrary, Fig. 2 of VAN DER LELY shows tools 25 which

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are fixed to flanges or rings 23 of a rotor. It is noteworthy that the tools 25 are not disclosed as being able to move with regard to flanges 23. Thus, there would appear to be no need to utilize any biasing mechanisms. In contrast, Appellant's claim 31 recites a biasing mechanism, e.g., plate 14, which biases the tools 1 against the rotor 12.

It is also clear that the tools 25 do not have a ring portion. To the contrary, the tools 25 are shown as being fixed to an internal opening of the flanges 23 of the rotor. On the other hand, Appellant's invention provides for a ring portion, e.g., 2, which allows the tools to be mounted to the rotor 12.

On page 4, lines 19-20 of the Final Office Action, the Examiner asserted that "[t]he fixing portion includes a ring portion (23) movably fixed to the rotor via the axle." However, it is clear that the so-called "ring portion (23)" is not part of the tool 25. To the contrary, it is in fact a part of the rotor. Nor is there any disclosure in this document indicating that the tools 25 are movably mounted. Indeed, the Examiner has never identified any such disclosure.

Appellant emphasizes that claim 31 clearly recites a mechanism (e.g., ref. 14) which biases the tools against the rotor and that each tool is "movably fixed to the rotor." Moreover, claim 32 clearly recites that the fixing end has a ring portion (e.g., ref. 2) that is "movably fixed to the rotor", a soil engaging portion which is plate-like (e.g., ref. 4), and a mechanism (e.g., ref. 14) which biases the tools against the rotor. Finally, claim 33 clearly

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recites that the fixing end (ref. 2) can be “pivotally and removably mounted to the rotor” and an active portion (ref. 4) that has “an approximately planar portion having a sharp edge.” None of these features have been shown to be disclosed in this document.

In the rejection, the Examiner erroneously opines that the clip 22 acts to bias “the tools against the rotor” (see page 4, line 20 of the Final Office Action). The Examiner also erroneously concludes that the tools 25 are biased against the rotor, when in fact they are not. The Examiner also fails to appreciate or give patentable weight to the fact that there is not even engagement between the tools 25 and the clip 22 (see Fig. 2). These assertions are contrary and/or are simply not supported by the disclosure of VAN DER LELY.

The Examiner also erroneously asserts that each tool 25 has a ring which receives a journal. However, it is clear that the tools 25 do not have a ring. To the contrary, the tools 25 have journals which are inserted into rings 23 of the rotor (see Fig. 2 and col. 2, lines 40-41 and 60-62). It is also apparent that this document contains no disclosure indicating that the tools 25 can move in the rings 23. To the contrary, Fig. 2 suggests that they are connected (i.e., with tapered surfaces) in a manner that would prevent any movement once the nut 27 is tightened. Thus, it cannot reasonably be argued that this document teaches to “movably” or “pivotally” mount the tools to the rotor as recited in claims 31-33.

Nor does the Examiner provide a reasonable argument in support of the assertion that the tools 25 have a planar active portion. To the contrary, it is clear from Fig. 5 that the ribs

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44 and 45 are not planar.

Finally, Appellant notes the following examples of the Examiner's clear mischaracterization of the reference:

The Examiner asserts that ref. 23 of VAN DER LELY is a ring. Appellant does not disagree, but notes that it is the rotor and not the tools 25 which have a ring 23. No disclosure can be found in this document indicating that the tools have rings that are movably mounted to a rotor.

The Examiner asserts that ref. 24 of VAN DER LELY is a journal. Appellant does not disagree, but notes that the tools 25 clearly are not mounted to a rotor via an axle. Unlike the invention, the tools 25 have their own axle. Again, no disclosure can be found in this document indicating that the tools are movably mounted to a rotor via axles.

The Examiner asserts that ribs 44 of VAN DER LELY can be characterized as planar. Appellant completely disagrees. Such an interpretation is mere speculation and is not supported by any disclosure in this document.

Appellant additionally submits that the Examiner has set forth no legal basis for disregarding and/or for not giving patentable weight to the above-noted recited features. Appellant submits that the Examiner is not free to disregard features which describe and limit the invention. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1306, 51 USPQ2d 1161, 1166 (Fed. Cir. 1999).

Thus, Appellant submits that the limitations recited in at least claims 31-33 are not disclosed, or even suggested, by any proper reading of VAN DER LELY.

Appellant notes that, for an anticipation rejection under 35 U.S.C. § 102(b) to be proper, each element of the claim in question must be disclosed in a single document, and if the document relied upon does not do so, then the rejection must be withdrawn.

For the foregoing reasons and because VAN DER LELY fails to disclose the above-noted features of the instant invention, Appellant submits that VAN DER LELY fails to disclose each and every recited feature of the instant invention. Accordingly, Appellant submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) and that the instant rejection is improper.

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Claims 35-38, 40, 41, 44, 48, 50 and 51 stand or fall with independent claim 33 for purposes of this appeal.

Claim 34 is separably patentable from claim 33 in that it additionally recites that the fixing end comprises an opening which is concentric to the pivot axis. However, it is clear that the tools 25 of VAN DER LELY do not have any openings whatsoever, much less, an opening arranged at the fixing end and/or one that is concentric to a pivot axis. To the contrary, the tools 25 have a fixing end that has the form of a journal that is inserted into a ring 23 of a rotor. See Fig. 2.

Claim 39 is separably patentable from claim 33 in that it additionally recites that the



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fixing end comprises a ring adapted to receive a journal axle. However, it is clear that the tools 25 do not have any rings whatsoever, much less, a ring that is adapted to receive a journal. Again, the tools 25 have a fixing end that has the form of a journal that is inserted into a ring 23 of a rotor. See Fig. 2.

Claim 42 is separably patentable from claim 33 in that it additionally recites that the active portion has an inclined portion and includes a first lower surface and a second lower surface, the first lower surface being arranged above the second lower surface when the at least one tool is mounted on a rotor. However, it is clear that the active portion of the tools 25 do not have surfaces which are arranged one above the other when the tool 25 is mounted to the rotor. To the contrary, the active portion of the tools 25 have surfaces which are approximately parallel to a center axis "b" of the rotor. See Fig. 2.

Claim 43 is separably patentable from claim 33 in that it additionally recites that the active portion comprises a boss portion. The boss 11 is shown in Appellant's Fig. 1. However, to the extent that the Examiner characterizes the three projections extending from the tools 25 as planar portions with sharp leading edges (which Appellant completely disagrees with), the Examiner is not free to further characterize these features as a boss portion.

Claims 45-47 are separably patentable from claim 33 in that they respectively additionally recite that the tool is mounted on a rotor, the tool is adapted to pivot freely

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between an angle of  $0^{\circ}$  to  $180^{\circ}$ , that the tool is adapted to pivot freely between an angle of  $45^{\circ}$  to  $65^{\circ}$ , and that when the tool is mounted on a rotor, the tool is adapted to pivot freely by an angle which is equal to or greater than  $180^{\circ}$ . However, the Examiner can point to no disclosure in this document which indicates that the tools 25 are movably mounted, much less, that they are free to pivot. To the contrary, it is apparent that the tools 25 are designed to be fixed to the rings 23 via the nuts 27. Moreover, the fact that the tools 25 have tapered journals which engage tapered surfaces of the rings 23 strongly suggest that the tools 25 could not move once the nuts 27 are tightened. See Fig. 2.

Claims 52-54 are separably patentable from claim 33 in that they respectively additionally recite that the active portion comprises a surface that is approximately planar, that the active portion comprises a surface that is approximately planar and is oriented at an angle relative to a plane that is substantially perpendicular to the pivot axis, and that the angle is on the order of 6 degrees. However, the Examiner can point to no disclosure in this document which indicates that the tools 25 have any planar surfaces, much less, one that is approximately planar and is oriented at an angle relative to a plane that is substantially perpendicular to the pivot axis. To the contrary, it is apparent that the tools 25 have only curved surfaces. See Fig. 2.

Thus, for reasons given above, including reasons given for the reversal of the rejection of independent claims 31-33, reversal of the Examiner's decision to finally reject claims 31-

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54 is requested. Further, Appellant requests that the application be remanded to the Examiner for allowance.

*Traversal of the Examiner's comments*

Regarding the Examiner's statement on page 5 of the final Office Action that the claims "do not specify how the mechanism for biasing is to work," Appellant notes that there is no requirement that the claims recite all of the features required for the invention to work. As the Examiner well knows, the claims can only be anticipated by a prior art document if that document discloses all of the claimed features.

Regarding the Examiner's statement on page 5 of the final Office Action that the "clip (22) clearly urge the tool against the rotor," Appellant notes that such an assertion is clearly not based on a reasonable reading of the VAN DER LELY patent and is not supported by the document itself. As the Examiner should understand, the clip acts to retain the rotor journal 19 and does not act to bias anything.

Regarding the Examiner's suggestion on page 5 of the final Office Action that Appellant "has not provided any structural definition of the mechanism for biasing," Appellant notes that there is no requirement that claim terms be defined in the claims themselves. In this case, the specification at least one example of such a mechanism. See e.g., ref. 14 in Fig. 5.

Regarding the Examiner's suggestion on page 5 of the final Office Action that Appellant "has not claimed that the tools move relative to the flanges." Appellant notes that claims 31 and 32 clearly recite that the tools have fixing ends that are movably mounted to the rotor. For example, claim 31 recites "each fixing end being movably fixed to the rotor via an axle". Moreover, claim 32 recites "each fixing end comprising a ring portion which is movably fixed to the rotor via an axle".

Finally, Appellant reminds the Examiner that he has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

## I. CONCLUSION


For the reasons advanced above, Appellant submits that the rejections are erroneous and that the Examiner's decision to reject claims 31-54 should be reversed. Claim 46 is not indefinite and claims 31-54 patentably define over the applied art of record.

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This appeal brief is being submitted in triplicate, pursuant to 37 CFR 1.192(a).

A check is enclosed in the amount of \$160.00 for payment of the fee for filing an appeal brief, as set forth in 37 CFR 1.17(c). The Commissioner is authorized to charge any additional fee, or to credit any overpayment, to Deposit Account No. 19-0089.

Respectfully submitted,  
Roger PELLENC

  
Reg. No. 45,294

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Neil F. Greenblum  
Reg. No. 28,394

April 23, 2003  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191

Attachment: Appendix

**APPENDIX**

*Claims on Appeal:*

31. A device for a soil cultivating machine, comprising:  
a rotor adapted to be rotatably mounted to the soil cultivating device;  
a plurality of tools interchangeably mounted on the rotor;  
each of the plurality of tools comprising a fixing end, a soil engaging portion, and a connecting portion which connects the fixing end to the soil engaging portion;  
each fixing end being movably fixed to the rotor via an axle;  
each soil engaging portion comprising a curved member having a leading edge; and  
a mechanism for biasing the tools against the rotor.

32. A device for a soil cultivating machine, comprising:  
a rotor adapted to be rotatably mounted to the soil cultivating device;  
a plurality of tools interchangeably mounted on the rotor;  
each of the plurality of tools comprising a fixing end, a soil engaging portion, and a connecting portion which connects the fixing end to the soil engaging portion;  
each fixing end comprising a ring portion which is movably fixed to the rotor via an axle;  
each soil engaging portion arranged below the ring portion and comprising a plate like member having a leading edge; and  
a mechanism for biasing the tools against the rotor,  
wherein each of axles are oriented at an angle relative of a center axis of the rotor.

33. A tool for a soil cultivating machine having a rotor, the tool comprising:  
a fixing end comprising an upper space zone and a pivot axis;  
the fixing end being adapted to be pivotally and removably mounted to a rotor about the pivot axis;  
a connecting portion comprising an intermediate space zone which extends

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downwardly from the fixing end; and

an active portion comprising a lower space zone and an approximately planar portion having a sharp leading edge,

wherein the active portion projects towards a direction of rotation of a rotor when the tool is installed on a rotor.

34. The tool of claim 33, wherein the fixing end comprises an opening which is concentric to the pivot axis.

35. The tool of claim 33, wherein the soil cultivating machine comprises one of a weeding machine, a hoeing machine, and a vineyard plow when the tool is installed on a rotor.

36. The tool of claim 33, wherein the tool is adapted to be interchangeably mounted to a rotor when the tool is installed on a rotor.

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37. The tool of claim 33, wherein the connecting portion is arranged to be inclined relative to a center axis running through a rotor when the tool is installed on a rotor.

38. The tool of claim 33, wherein the soil engaging portion extends radially outwardly from the fixing end.

39. The tool of claim 33, wherein the fixing end comprises a ring adapted to receive a journal axle.

40. The tool of claim 33, wherein the tool comprises a shape which resembles one of a hook and an "L".

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41. The tool of claim 33, wherein the soil engaging portion comprises at least one curved portion.

42. The tool of claim 33, wherein the active portion has an inclined portion and includes a first lower surface and a second lower surface, the first lower surface being arranged above the second lower surface when the at least one tool is mounted on a rotor.

43. The tool of claim 33, wherein the active portion comprises a boss portion.

44. The tool of claim 33, wherein the tool is installed on a rotor which is rotatably mounted on a soil cultivating machine.

45. The tool of claim 33, wherein when the tool is mounted on a rotor, the tool is adapted to pivot freely between an angle of  $0^{\circ}$  to  $180^{\circ}$ .

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46. The tool of claim 45, wherein the tool is adapted to pivot freely between an angle of  $45^{\circ}$  to  $65^{\circ}$ .

47. The tool of claim 33, wherein when the tool is mounted on a rotor, the tool is adapted to pivot freely by an angle which is equal to or greater than  $180^{\circ}$ .

48. The tool of claim 33, wherein the pivot axis is not parallel to a center axis of a rotor when the tool is mounted to a rotor.

50. The tool of claim 33, wherein when the tool is mounted on a rotor, a guide is arranged adjacent a rotor.

51. The tool of claim 33, wherein when the tool is mounted on a rotor, a fixing flange



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is arranged to help retain the tool on a rotor.

52. The tool of claim 33, wherein the active portion comprises a surface that is approximately planar.

53. The tool of claim 33, wherein the active portion comprises a surface that is approximately planar and is oriented at an angle relative to a plane that is substantially perpendicular to the pivot axis.

54. The tool of claim 53, wherein the angle is on the order of 6 degrees.